

DUMBCANE (DIEFFENBACHIA SP.)
A COMMON POISONOUS ORNAMENTAL PLANT

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Several different species and many cultivars of Dieffenbachia, including D. picta (Lodd.) Schott (fig. 1), are grown as ornamentals, primarily as pot plants, or in south Florida and the tropics, outdoors as well. The plants produce attractive, large, variegated or variously mottled foliage, useful for a tropical effect.

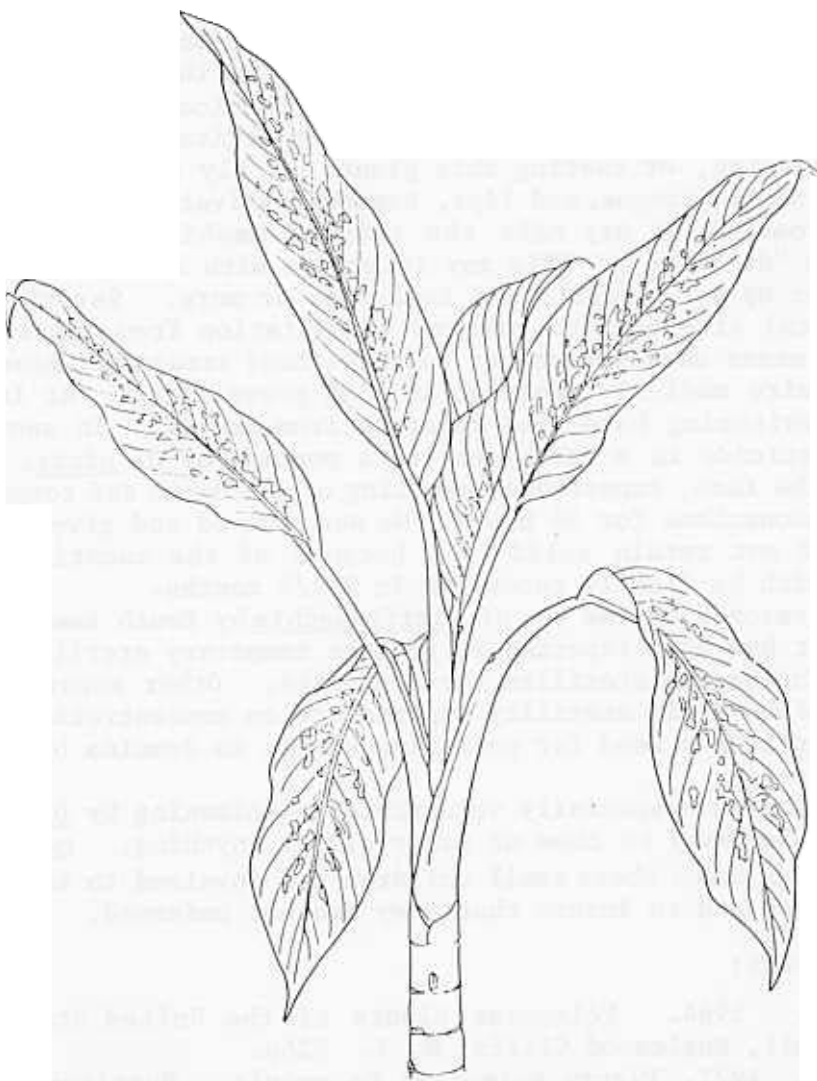


Fig. 1. Dieffenbachia picta (after West, 1960)

The genus Dieffenbachia is a member of the Araceae family and produces many tiny flowers on a spike or spadix enclosed in a spathe, as do other members of the family. This entire inflorescence is often mistaken for a single flower, but is actually an aggregate of many flowers.

The various species of Dieffenbachia may grow to as much as 6 ft. (1.8 m) tall with thick, fleshy, usually green stems usually 1 in. or less thick, but sometimes up to around 2 in. (50 mm) thick. The leaves have short or long petioles clasping the stem at the base. The blades are up to 6 in. (15 cm) wide and as much as 14 in. (35 cm) long, tapering, rounded, or subcordate at the base and acute to acuminate at the tip. The leaves are green or variously marked or spotted with white or cream. All parts of the plant are smooth (gla-brous).

All parts of the plant, especially the stem, contain a slightly milky sap and needle-like crystals of calcium oxalate. This sap is extremely irritating, especially if a piece of the plant is chewed or swallowed. It can also be irritating to the hands, etc., as a result of cutting or handling pieces of the plant. The exact cause of the irritation is a subject of controversy. Some people consider the calcium oxalate crystals to be the primary irritants, but there is evidence to indicate that some other chemicals, as yet unidentified but possibly protoanemonine, causes most of the irritation.

Biting, chewing, or tasting this plant quickly produces irritation and burning of the mouth, tongue, and lips, copious salivation, and swelling of the tongue and throat which may make the tongue immobile and speech impossible (hence the name "dumbcane"). This may interfere with swallowing and breathing, and may last for up to several days to a week or more. Severe cases require immediate medical attention to prevent asphyxiation from impaired breathing. Mild poisoning cases usually recover fully without treatment; however, more severe cases require medical treatment and can prove fatal. At least 3 deaths from dumbcane poisoning have been reported from Brazil. In another report a man attempted suicide in a bar by eating a portion of D. picta. He vomited, became red in the face, experienced swelling of the mouth and tongue, collapsed, and remained unconscious for 36 hours. He was revived and given medical treatment, but could not retain solid food because of the caustic action on his stomach from which he finally recovered in 2 1/2 months.

There are records of the use of Dieffenbachia by South American Indians as arrow poison. It has been reported to produce temporary sterility and has been used by these Indians to sterilize their enemies. Other reports indicate its use during World War II in sterility experiments on concentration camp inmates. In colonial days it was used for punishing slaves in Jamaica by rendering them speechless.

Small children are especially vulnerable to poisoning by Dieffenbachia because of their tendency to chew or taste almost anything. Considerable precautions should be taken where small children are involved to keep these plants out of their reach and to insure that they are not poisoned.

SELECTED REFERENCES:

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